CLAIM AMENDMENTS

Please cancel claim 27 and 29 without prejudice or disclaimer.

Please amend claims 1, 7, 11, 17, and 19 as follows.

1. (Currently Amended) A method comprising:

performing a search for data channels in several multimedia channels in a cable network by:

eliminating from the search channels associated with analog media content and/or non-digital signal sources;

tuning a receiver of a broadband cable signal associated with a ~~first~~ quadrature amplitude modulation (QAM) technique to a channel within the broadband cable signal;

temporarily ~~modifying receiver parameters~~ activating adaptive equalizer logic in a QAM modulator to demodulate the channel according to a ~~second~~ quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an I/Q constellation ~~that differs from the first modulation technique associated with the broadband cable signal, wherein temporarily modifying the receiver parameters comprises modifying receiver parameters to effect a low signal to noise ratio and a wide auto-gain control loop bandwidth~~;

sweeping a carrier frequency of the receiver over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated to demodulate the selected channel according to the QPSK modulation technique ~~parameters are temporarily modified~~;

and if a channel lock is obtained, determining whether the selected channel is a data channel;

and if the selected channel is a data channel, then returning the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QPSK technique ~~updating one or more operating parameters of the cable modem in accordance with the data channel~~.

2. (Previously Presented) A method according to claim 1, wherein the channel is a narrow-band channel within the broadband cable signal.

3. (Canceled).

4. (Previously Presented) A method according to claim 1, wherein tuning the receiver to a channel comprises:

accessing a storage medium for a list of information channels within the broadband cable signal; and

selecting a channel from the list to which the receiver is tuned.

Claims 5-6. (Canceled).

7. (Currently Amended) A method according to claim 4, further comprising:

selecting a next channel from the list of information channels if a channel lock could not be obtained;

repeating the ~~modifying~~ activating and sweeping operations to attempt to obtain a channel lock on the next selected channel; and

repeating the foregoing operations until a data channel is identified.

8. (Previously Presented) A method according to claim 7, further comprising:

updating the list of channels to promote the channel identified as a data channel to the first channel in the list.

9. (Canceled).

10. (Original) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a method according to claim 1.

11. (Currently Amended) A computing system comprising:

a storage medium including a plurality of executable instructions; and

a control unit, coupled to the storage medium, to execute at least a subset of the plurality of executable instructions to implement a data channel detection agent, wherein the data channel detection agent,

performs a search for data channels in several multimedia channels in a cable network by:

eliminating from the search channels associated with analog media content and/or non-digital signal sources;

tunes a receiver of a broadband cable signal associated with a ~~first~~ quadrature amplitude modulation (QAM) technique to a channel within the broadband cable signal;

temporarily ~~modifies receiver parameters~~ activates adaptive equalizer logic in a QAM modulator to demodulate the channel according to a ~~second~~ quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an I/Q constellation ~~that differs from the first modulation technique associated with the broadband cable signal, wherein temporarily modifying the receiver parameters comprises modifying receiver parameters to effect a low signal to noise ratio and a wide auto-gain control loop bandwidth~~;

causes a carrier frequency of the receiver to be swept over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated to demodulate the selected channel according to the QPSK modulation technique ~~parameters are temporarily modified~~;

and if a channel lock is obtained,

determines whether the selected channel is a data channel;

and if the selected channel is a data channel, then returning the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QAM modulation technique ~~updates one or more cable modem operating parameters in accordance with the data channel~~.

12. (Previously Presented) A computing system according to claim 11, wherein the data channel detection agent accesses a storage medium for a list of information channels within the broadband cable signal, and selects one of the channels within which to find system information.

13. (Canceled).

14. (Previously Presented) A computing system according to claim 12, wherein the channel detection agent steps to a next channel in the list if the demodulated channel is not a data channel.

15. (Previously Presented) A computing system according to claim 14, wherein the channel detection agent updates the list to promote a channel identified as a data channel to a first channel in the list.

16. (Canceled).

17. (Currently Amended) A computing system according to claim 11, wherein the channel detection agent further performs operations comprising:

~~restoring demodulator settings to demodulate according to the first modulation technique to produce demodulated channel data; and~~

extracting information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

18. (Original) A computing system according to claim 11, wherein the computing system is a cable modem.

19. (Currently Amended) A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a channel detection agent to,

eliminate from a search for data channels in several multimedia channels in a cable network channels associated with anal log media content and/or non-digital signal sources;

tune a receiver of a broadband cable signal associated with a ~~first~~ quadrature amplitude modulation (QAM) technique to a channel within the broadband cable signal;

temporarily ~~modifiy receiver parameters~~ activates adaptive equalizer logic in a QAM modulator to demodulate the channel according to a ~~second~~ quadrature phase shift keying (QPSK) modulation technique to position a slicer in the QAM demodulator to an appropriate quadrant in an I/Q constellation ~~that differs from the first modulation technique associated with the broadband cable signal, wherein temporarily modifying the receiver parameters comprises modifying receiver parameters to effect a low signal to noise ratio and a wide auto-gain control loop bandwidth~~;

cause a carrier frequency of the receiver to be swept over a carrier loop bandwidth for the receiver to attempt to obtain a channel lock on the selected channel while the receiver is activated to demodulate the selected channel according to the QPSK modulation technique ~~parameters are temporarily modified~~;

and if a channel lock is obtained,

determines whether the selected channel is a data channel;

and if the selected channel is a data channel, then returning the adaptive equalizer logic in the QAM modulator to demodulate the selected channel according to the QAM modulation technique ~~update one or more cable modem operating parameters in accordance with the data channel~~.

20. (Previously Presented) A machine accessible storage medium according to claim 19, wherein the instructions to implement the data channel detection agent include instructions to access a storage medium for a list of information channels within the broadband cable signal, and to select one of the channels within which to search for system information.

21. (Canceled).

22. (Previously Presented) A machine accessible storage medium according to claim 20, wherein the instructions to implement the channel detection agent include instructions to step the receiver to a next channel in the list if the demodulated channel is not a data channel.

23. (Canceled).

24. (Currently Amended) A machine accessible storage medium according to claim 19, wherein the instructions to update one or more operating characteristics of the cable modem include instructions to:

~~restore the receiver to demodulate the channel in accordance with the first modulation technique associated with the broadband cable signal;~~

produce demodulated channel data carried over the channel; and

extract information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

25. (Previously Presented) The method of claim 1, wherein the operation of determining if the channel is a data channel comprises:

returning the temporarily modified receiver parameters to demodulate the channel according to the first modulation technique to produce demodulated channel data;

extracting information from the demodulated channel data to determine whether the channel is a data channel or a digital multimedia channel.

26. (Previously Presented) The method of claim 25, wherein the information that is extracted comprises a program identification field (PID) in a DOSCIS protocol header.

Claims 27-29. (Canceled).